

UNIQUELY IDENTIFYING SUPPLY CLASS V

Purpose:

The purpose of this document is to provide the strategy for Class V compliance to the Department of Defense Guide to Uniquely Identifying Items for Assuring Valuation, Accountability and Control of Government Property Version 1.4 published 16 April 2004 by the Office of the Principal Deputy Under Secretary of Defense (Acquisition, Technology & Logistics). There are several challenges facing implementation of the UID guidance and the affect on business practices inherent to Class V. The logic and intent of the guidance is congruent to the historical practices of munition management. However, there are issues in the guidance that present significant impact to the current Class V business process. This document will highlight these issues and recommend a solution to allow immediate compliance with the current guidance while providing enhancements to our current processes.

Background:

Department of Defense (DoD) Instruction 5000.64, Defense Property Accountability, requires that accountability records be established for all property (property, plant, and equipment) with a unit acquisition cost of \$5,000 or more, items that are sensitive or classified, and items furnished to third parties, regardless of acquisition cost. Property records and/or systems are to provide a complete trail of all transactions suitable for audit. DoD 4140.1-R DoD Supply Chain Materiel Management Regulation specifies accountability and inventory control requirements for all property and materiel received in the national supply system. A key component of effective property management is to use best business practices. In terms of achieving the desirable end state of integrated management of items, the collective DoD goal, shared by all functional processes involved in property management, is to uniquely identify items while relying to the maximum extent possible on international standards and commercial item markings while not imposing unique government requirements. Unique identification of items will help achieve:

- Integration of an item's data across the DoD, federal and industry asset management systems, as envisioned by the DoD
- Financial Management Enterprise Architecture (FMEA), to include improved data quality and global interoperability and rationalization of systems and infrastructure
- Improved item management and accountability
- Improved asset visibility and life cycle management
- Clean audit opinions on item portions of DoD financial statements

Issues:

For clarification and discussion the term “item” is considered “an each” and is directly associated with how the item was procured. For example, small caliber ammunition may be packaged in boxes or cans, assembled or linked, but it is purchased and priced by each round of ammunition. It is at this ‘each’ level we propose UID implementation.

There are two main issues associated with Class V items and the current published UID guidance:

1. Need lot and serial number included in a construct: Class V has historically tracked, identified and managed items in stock through a variety of identifiers inherent to their business practice. Most common, and most critical and required in MIL-STD -1168B, Ammunition Lot Numbering and Ammunition Data Card, to successfully manage Class V is the use of lot number. MIL-STD-1168B defines an ammunition lot as a quantity of ammunition (complete rounds, components, propellants, etc.) which is manufactured or assembled by one producer under uniform conditions and which is expected to function in a uniform manner. An ammunition lot is designated and identified by assignment of an ammunition lot number. All materiel comprising an ammunition lot must be homogeneous. MIL-STD-1168B defines ammunition lot number as a code number systematically assigned to each ammunition lot at the time of manufacture, assembly or modification that uniquely identifies the particular ammunition lot.

Other classes of supply (Class I, II, and VIII) share similar business practices of tracking and identifying items in stock using lot number. In addition to lot number tracking, Class V also contains serialized items. These items are directly associated with their lot number and are lot and serial number tracked in the respective automated information system (AIS). This association and management practice provides for the realization of acquisition objectives, fiscal management and valuation of the current inventory by item.

Commercial ammunition producers also manage via lot number. Sub-component suppliers to the ammunition producer manage by component lot number. The component lot number is used in the construction of Ammunition Data Cards, and is used to track and suspend ammunition lots that may contain sub-components containing defects.

Additionally, acceptance testing, payment via the Wide Area Work Flow (Electronic Invoicing DD Form 250) and warranty clauses require lot number.

Managing Class V items by lot is currently the most economical means of identifying munitions. Lot numbers also identify those Class V items that are serialized. Construct #1 and Construct #2 contained in the current UID guidance do not contain lot number. Construct #2A allows for the use of lot number only in those instances where Construct 2 cannot derive a unique ID. Construct 2A (pg.18 of UID Guide, footnote 31) further stipulates this

should only be a legacy practice and new acquisitions should only utilize Construct 1 or 2. Pertinent data:

- a. Both the serial number and lot number are required data entries in the transactions to the accountable record at every level of storage (e.g., depot, ammunition supply point (ASP), bomb dump, shipboard ammunition storage magazine, etc.).
 - b. Class V has the capability to suspend a specific serialized item or the entire lot in the event of a malfunction.
 - 1) Lot numbers are the key to managing the safety and reliability of the DoD ammunition stockpile. Incidents involving a particular Lot are used to immediately suspend all items in this lot anywhere in the world pending investigation. Because of the strict lot numbering system of MIL-STD-1168, similar items can be identified that may have a similar defect without suspending the entire stockpile.
 - 2) Lot numbers are used to monitor the health of the inventory of DoD munitions and give an indication of remaining shelf life. This allows the ammo managers to best utilize the inventory to provide safe ammo at the lowest cost. One key example is the reference samples of propellants of every lot that are maintained and tested regularly to indicate remaining stabilizer amount. Without adequate stabilizer, propellants can become unstable and auto-ignite. The entire safety surveillance program is based on lot numbers and the ability to track and suspend specific lots of ammo.
2. The placing/implementing of UID on qualifying legacy stocks (e.g., during regular maintenance) will involve Engineering Change Proposals (ECP), Technical Manual updates, marking equipment, etc. These are all unfunded requirements and will require funding prior to completion of UID compliance. Placing a UID on qualifying legacy stocks should not occur if it would involve intrusion through specialized packaging (humidity/vapor bags, etc.), which may violate manufacturers warranty and would involve unfunded resources to accomplish. Furthermore, utilizing the seek and apply strategy outlined in the UID guidance it is not likely that Class V UID qualifying items will be completely physically marked by 2010.

Recommendations:

1. The Joint Services have agreed to the modified Construct #2. This construct will provide Class V and other classes of supply that manage by lot or batch number the capability to comply with the current UID policy with minimal interference to current business practices. Construct #2 will now include three possible data constructs:

IAC EID ORIGINAL PART NUMBER SERIAL NUMBER,
IAC EID BATCH NUMBER SERIAL NUMBER, OR
IAC EID LOT NUMBER SERIAL NUMBER

The constructs in the currently published UID policy/guide are in Figure 1 below and will be modified (per above) to include lot or batch number, for use as required by each Supply Class business case.

	UID Construct #1	UID Construct #2
Based on current enterprise configurations	If items are serialized within the Enterprise	If items are serialized within the Part Number
UID is derived by concatenating the data elements IN ORDER	Issuing Agency Code* Enterprise ID Serial Number	Issuing Agency Code* Enterprise ID Original Part Number (or Batch Number or Lot Number) Serial Number
Optional Data Identified on assets not part of the UID (Separate Identifier)	Current Part Number**	Current Part Number**
<p>* The issuing Agency Code (IAC) represents the registration authority that issues the Enterprise ID (e.g. Duns, and Bradstreet, EAN.UCC). The IAC can be derived from data qualifier for enterprise identifier and does need to be marked on the item.</p> <p>** In instances where the original part number changes with new configurations (also known as part number roll), the current part number may be included on the item as a separate data element for traceability purposes.</p>		

Figure 1

2. In consideration of the capability and historical management processes of Class V, the compliance to the current UID guidance can be separated into two specific categories: new procurements and legacy stocks.

- a. **Compliance for new procurements**

Class V agrees with the use of the Data Matrix format for all new contracts whose end items qualify for UID, in accordance with an approved policy and implementation plan for Class V items.

- b. **Compliance for legacy stocks**

- 1) **Class V concurs with the UID Policy Office's strategy to virtually mark legacy munitions stocks utilizing the resident AIS capability to uniquely identify qualifying UID items.** Each Joint Service ammunition AIS can comply with virtually marking inventory without the need to physically mark the asset. Acquisition objectives, valuation, inventory levels and demilitarization costs can be determined for each qualifying item using the current AIS and a virtual UID. For example, the Army Logistics Modernization Program (LMP) service assigns a SAP batch number in addition to the lot and serial number for item level event tracking. Since LMP is an integrated database, it will not allow the duplication of serial numbers. In practice, the UID is entered into the database and the UID registry. From the asset, the UID can be identified via an association with normal box, package, and pallet level markings. From the database, the UID and associated financial, inventory, maintenance data, etc. will be directly identified.
- 2) Virtually marking UID qualifying Class V items will allow implementation of the UID guidance with minimal impact on resources.
- 3) Scanners capable of reading the Data Matrix format are capable of reading PDF417 format. However, scanners capable of reading PDF417 may not be capable of reading Data Matrix.
- 4) The SMCA has currently fielded over 500 scanners, associated software and printers to accommodate PDF417 format and comply with MIL-STD-129 and MIL-STD-130 Identification Marking of U.S.

Military Property. These scanners are not capable of reading Data Matrix.

- 5) Equipment capable of reading Data Matrix formatting will be phased in and completed by FY2010.

Conclusion:

Class V will comply with the intent of uniquely identifying items. All new procurement contracts, whose end items qualify for UID, will contain the mandated requirement to apply the UID in the data matrix format on each qualifying item. Class V will continue to include the use of PDF417 in accordance with MIL-STD-129 and MIL-STD-130 on all new production contracts and on legacy stocks at the box / pallet level. Utilizing a UID construct that includes lot number will allow for accurate, seamless transfers of data and ultimately enhance business processes. Virtually marking UID qualifying Class V items allows implementation of the UID guidance with minimal impact on resources. Class V policy, regulations, established procedures, and business practices have afforded the ammunition community an inherent means of life cycle management. The logic associated with the UID Policy is harmonious with the Class V business practice methodology. **The recommended construct and implementation strategy will enable all Class V Automated Information Systems the ability to comply with the UID policy with minimal resources and enhance the current business process.**